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(54) **Title:** TUBING RETRIEVABLE CAPILLARY BYPASS SAFETY VALVE AND CAPILLARY INJECTION SLEEVE

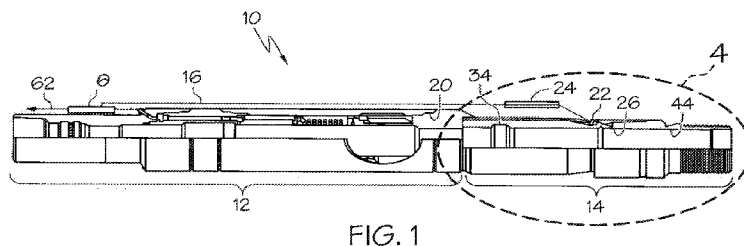


FIG. 1

(57) **Abstract:** A chemical injection system includes a TRSV; a communication nipple in operable communication with the TRSV and positioned relative to the TRSV to be downhole of a flapper closure mechanism thereof when installed in a wellbore; a chemical injection line in fluid communication with the communication nipple; and a capillary sleeve receivable at the communication nipple and configured to sealingly convey fluid from the communication nipple to a remote location without affecting operation of the TRSV and method.



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A. CLASSIFICATION OF SUBJECT MATTER*E21B 34/00(2006.01)i, E21B 21/10(2006.01)i, E21B 21/08(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC: E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

KOMPASS (KIPO internal), "Keywords: chemical injection, capillary, and sleeve"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4605063 A (ROSS, RICHARD J.) 12 August 1986 see abstract; column 2 lines 66-68, columns 3, 4, column 5 lines 1-20; claim 1; figures 1-4	1-13
A	US 5117913 A (THEMIG, DANIEL J.) 2 June 1992 see abstract; column 6 lines 48-68, column 7, column 8 lines 1-28; claim 1; figures 2-4	1-13
A	US 4660647 A (RICHART, JENE A.) 28 April 1987 see abstract; column 4 lines 23-68, columns 5-7, column 8 lines 1-63; claim 1; figures 3-5	1-13
A	US 2006-0231256 A1 (RIVAS, OLEGARIO et al.) 19 October 2006 see abstract; paragraphs [0010]-[0020]; claim 1; figures 1-6	1-13

 Further documents are listed in the continuation of Box C. See patent family annex.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4605063 A	12.08.1986	NONE	
US 5117913 A	02.06.1992	NONE	
US 4660647 A	28.04.1987	NONE	
US 2006-0231256 A1	19.10.2006	NONE	